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ABSTRACT

AN ANALYSIS OF THE INTERRELATIONSHIP OF SPEAKING AND READING SKILLS IN SECOND LANGUAGE ACQUISITION IS THE OBJECT OF AN EXPERIMENT DESCRIBED IN THIS ARTICLE. THE HYPOTHESIS TESTED SUGGESTS THAT WRITTEN STIMULI HAVE A NEGATIVE INFLUENCE ON THE FORMATION OF SPEECH HABITS OF BEGINNING STUDENTS. OBJECTIVES, METHODS, AND SUBJECT AND DATA SELECTION ARE DESCRIBED. A TABLE OF RESULTS INDICATES SIGNIFICANT CHANGE IN SUBJECT BEHAVIOR WITH THE VARIATION OF STIMULI, THEREBY SUPPORTING THE AUTHOR'S HYPOTHESIS. (RL)

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. . . AND THEN THEY DISBELIEVED THEIR EARS

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Does reading reinforce audiolingual imitation and help pronunciation or is reading a source of interference instead? When faced with two conflicting stimuli, one aural and one written, to which of these stimuli will a subject respond?

Informal observations while teaching Spanish audiolingually during the last ten years have led me to believe that the answer to the first question above should be that reading is a source of interference. However, I have often come across the opposite view expressed by language teachers and others related in various ways to the foreign language teaching profession. Therefore, in order to gather empirical data that would allow at least a partial scientific answer to the two questions above, I decided to conduct a small experiment.

The subjects of the experiment were students selected at random from among the undergraduates at Western Washington State College in Bellingham, Washington. This randomization, however, is qualified: students with any knowledge of Spanish as well as those with a foreign linguistic background were excluded and the number of male and female subjects was kept balanced. As it turned out, there were 35 subjects (actually 40 participated but the recordings of five could not be used due to technical difficulties.) Of the 35, 17 were males and 18 females. The average age of the subjects was 20 years and five months. Their foreign language learning experience averaged (expressed decimally) 2.8 years of study, with one student at one extreme, a German major, having completed 8 years of study, and five students at the other extreme having studied no foreign language at all.

The task performed by the subjects consisted of recording, under four different conditions, ten Spanish utterances of two to four syllables each. First they recorded three times, after the native speaker's (the experimenter's) oral model, their imitation of the utterance, without the written form of the utterance being visible. Then they recorded twice, after the native speaker's oral model, their imitation of the utterance while the written form of the utterance was shown to them. Then they recorded once their reading of the utterance without benefit of an oral model. Finally, when the first three steps had been completed for each of the ten utterances, they recorded once their reading, without an oral model, of the complete list. (The equipment used for the recordings was of high fidelity, namely, a Uher 4000-S.)

FL 001 554

The following criteria were used in selecting the ten Spanish utterances to be used in the experiment:

(1) The problems to be considered would be those points in the sound-spelling (i.e., phonemic-graphemic) inventory of Spanish and English in which the two languages have divergent phonemic-graphemic correlations: that is, there would be no need to check on the effects of, for example, the Spanish graphemes ⟪f⟫ and ⟪m⟫ on the native speaker of English, as these graphemes represent the same phonemes in both languages.

(2) The problems to be considered would be taken from the phonemic, phonetic, and graphemic repertoire of the subjects; that is, no use would be made of problems involving sounds or letters new to the subjects, as this would introduce an uncontrollable variable in the experiment. Application of the two criteria above reduced the number of problems amenable to experimentation to the following five: ⟪z⟫ for [s] rather than [z], ⟪qu⟫ for [k] rather than [kw], ⟪n⟫ for [m] rather than [n] before [p] and [b], ⟪v⟫ for [b] rather than [v], and ⟪h⟫ as [ø] rather than [h].

(3) It would be desirable, whenever possible, to test each problem in initial, medial, and final position; it is obvious that this can be done only in the case of ⟪z⟫.

(4) It would be desirable to use short utterances of no more than four syllables and to have no more than two of the five problems above in each utterance.

(5) Cognate words would have to be avoided, as they would introduce another uncotrollable variable in the experiment.

On the basis of the criteria just outlined, the following ten utterances were selected for the experiment (the problems are underlined, although they were not underlined, of course, on the cards that the subjects read):

1. almo<u>h</u>ada
2. <u>z</u>apato
3. en<u>v</u>asar
4. <u>qu</u>edan pocos
5. empe<u>z</u>ado
6. <u>v</u>ive ah<u>í</u>
7. al<u>qu</u>ilaste
8. e<u>n</u> pa<u>z</u>
9. <u>v</u>erdad
10. <u>h</u>abido

The rest of this article is devoted to a discussion of the results obtained and of the conclusions that can be derived from them.

In presenting the results, however, I shall limit myself to utterances 2, 4, 9, and 10. The reason for this is that these utterances have the problems in initial position (except of course for ≪n≫ as [m] in utterance No. 4). It was found that there was greater precision in the articulation of initial sounds, and that the lesser precision of non-initial articulations made their analysis and tabulation difficult.

The results are presented in a chart below. The numbers at the top of the chart refer to the conditions under which the utterances were imitated or read aloud: 1-3 are the three imitations of the oral model, 4-5 are the two imitations of the oral model while the written form of the utterance was visible, 6 is the reading of the utterance without benefit of an oral model, and 7 is the reading of the utterance again without an oral model, as part of the reading of the total list of ten utterances. The percentages in the chart refer to the percentage of subjects responding in a particular way, not to the total number of utterances of a particular sound; percentages are rounded to the nearest whole number.

Problem	Utterance	1-3	4-5	6	7
1. ⟪z⟫ for [s]	zapato	3 [s]'s.....100%	(2 [z]'s.....54%) 1 or 2 [z]'s...60% 2 [s]'s.....40%	[z].....74% [s].....26%	[z].....94%[1] [s]..... 6%
2. ⟪qu⟫ for [k]	quedan pocos	(3 [k]'s..... 94%) 2 or 3 [k]'s..100% [2]	2 [k]'s.....85% 1 or 2 [kw]'s.. 9% 1 or 2 [g]'s... 6%	[k].....85% [kw]....12% [g]..... 3%	[k].....69% [kw]....31%
3. ⟪n⟫ for [m]	quedan pocos	(3 [m]'s..... 69%) 2 or 3 [m]'s.. 94%[3] 2 or 3 [n]'s.. 6%	(2 [n]'s.....57%) 1 or 2 [n]'s...74% 2 [m]'s.....26%	[n].....91% [m]..... 9%	[n].....91% [~]..... 9%[4]
4. ⟪v⟫ for [b]	verdad	(3 [b]'s..... 83%) 2 or 3 [b]'s..97%[5] Other ..... 3%[6]	(2 [v]'s.....74%) 1 or 2 [v]'s...83% 2 [b]'s.....17%	[v].....91% [b].....9%	[v]....100%
5. ⟪h⟫ as [ø]	habido	(3 [ø]'s..... 85%) 2 or 3 [ø]'s...97%[7] Other..... 3%[8]	2 [ø]'s.....51% (2 [h]'s.....31%) 1 or 2 [h]'s...49%	[h].....63% [ø].....37%	[h].....54% [ø].....43% [b]..... 3%

Notes

1 Includes two [ts]'s by two students of German, clearly a result of the influence of spelling.

2 Includes one subject who produced [k k g] and one who produced [- k k], the blank being an indication that the subject did not imitate the utterance during the pause provided.

3 The 25% who had only two [m]'s consisted of three subjects with one blank and six subjects with one [n].

4 It is made up of three subjects who nasalized the previous vowel instead of articulating an [m] or an [n]; two of these three subjects were students of French.

5 The 14% who had only two [b]'s is entirely made up of subjects who produced [- b b].

6 One erratic subject produced [d v b].

7 The 12% who had only two [ø]'s consisted of two subjects with one [ø] and two with one [h].

8 One subject produced [~ - ø].

The results shown in the chart above indicate, very clearly in the case of problems 1, 3, and 4, and to a decreasing extent in the case of problems 5 and 2, the interference caused by spelling in the imitation of these Spanish sounds. Whereas practically all subjects imitated correctly an oral model in the absence of written stimuli, the majority of the subjects -- in problems 1, 3, and 4 -- and about one half of them -- in problem 5 -- were unable to imitate correctly the oral model as soon as they were allowed to see the written forms of the utterances in question. In other words, as soon as the written stimuli appeared, the subjects disbelieved their ears and their immediately preceding kinetic experience and produced a different response.

The apparently lesser degree of interference from spelling in the case of problem 5 (≪h≫ as [Ø]) and problem 2 (≪qu≫ for [k]) can be readily explained by the fact that more than half of the subjects were studying or had studied French, a language in which these two sound-spelling correlations are the same as in Spanish.

The degree of interference from spelling found in this experiment suggests that we are dealing with deeply set habits that lead language learners to disregard audio stimuli and rely on written stimuli for their oral production. If these habits are as deeply set as they appear to be, it seems that a mere explanation of the differences between native language and foreign language sound-spelling correlations, even if given repeatedly, would not be sufficient to form new habits. This in turn seems to point to the necessity for a pre-reading period, or at least for the use of aids such as transcriptions, when correct pronunciation is one of the goals of the foreign language program.